ABSTRACT

The influence of specific and non-specific training on finger flexors and shoulder girdle muscles strength in sport climbers

Aim

To assess the effect of the specific and the non-specific training on the finger flexors and shoulder girdle muscles strength in sport climbers.

Methods

Six climbers of the same performance took part in the study. This group of climbers was randomly devided into two groups. Each group was doing different exercise. The exercise was changed in the half time of the study programme. The climbers had to go through the training units focused on the stimulation of strength abilities using bouldering and exercises on the campus campus board during twelve weeks, which were devided into two periods of six weeks.

Results

The non-specific training had the biggest effect on the overhang length on campus board and on the Michailov´s test. The average pretest overhang length on campus board for the right hand was in one of the groups 68,3 ± 8,5 cm, after the nonspecific training, the overhang length incresed by 20 cm, after specific training by 11,7 cm. In the second group, the pretest overhang lenght on campus board was 70 ± 8,2 cm, after the non-specific training, the overhang length incresed by 19 cm, after the specific training by 6,7 cm. The biggest change in the hand strength appeared in the the Michailov´s test . The average maximum strength of the right hand increased in one group from 33,3 ± 4,9 kg by 8,9 kg after non-specific training, and by 5,7 kg after specific training . The average maximum strength of the second group was 36 ± 4,9 kg at the pretest, it increased by 9,7 kg after the non-specific training and by 3 kg after the specific training.

Conclusions

The results showed bigger increase in the finger flexors and shoulder girdle strength due to the effect of the non-specific training in comparison with the specific training.

Key words

Strength, bouldering, sports climbing, campus board, sport training.